Permit Limit Justifications

North Star 1 Mine

0IL00155*AD

Station				
001				
Final				
Rpt Code	Parameter	Limit	Units	Justification
74013	Manganese, Total	2.0	mg/l	NSPS
74013	Manganese, Total	4.0	mg/l	NSPS
00940	Chloride, Total		mg/l	Monitor Only
00945	Sulfate, (SO4)	1752	mg/l	WQS-Per Guidance
00515	Residue, Total Dissolved	1500	mg/l	WQS
00530	Total Suspended Solids	35	mg/l	NSPS
00530	Total Suspended Solids	70	mg/l	NSPS
00045	Total Precipitation		Inches	
00056	Flow Rate		GPD	Monitor Only
00095	Specific Conductance at 25 Degrees C		Umho/cm	Monitor Only
00400	pH	6.5	S.U.	WQS
00400	pH	9.0	S.U.	WQS
74010	Iron, Total (Fe)	3.0	mg/l	NSPS
74010	Iron, Total (Fe)	6.0	mg/l	NSPS
002				
Final				
Rpt Code	Parameter	Limit	Units	Justification
74013	Manganese, Total	2.0	mg/l	NSPS
74013	Manganese, Total	4.0	mg/l	NSPS
00940	Chloride, Total		mg/l	Monitor Only
00945	Sulfate, (SO4)	1752	mg/l	WQS-Per Guidance
00515	Residue, Total Dissolved	1500	mg/l	WQS
00530	Total Suspended Solids	35	mg/l	NSPS
00530	Total Suspended Solids	70	mg/l	NSPS
00056	Flow Rate		GPD	Monitor Only
00095	Specific Conductance at 25 Degrees C		Umho/cm	Monitor Only
00400	pH	6.5	S.U.	WQS
00400	pH	9.0	S.U.	WQS
74010	Iron, Total (Fe)	3.0	mg/l	NSPS
74010	Iron, Total (Fe)	6.0	mg/l	NSPS
003				
Final				
Rpt Code	Parameter	Limit	Units	Justification
74013	Manganese, Total	2.0	mg/l	NSPS

Report Date:6/10/2011

Permit Limit Justifications

Station				
003				
Final				
Rpt Code	Parameter	Limit	Units	Justification
74013	Manganese, Total	4.0	mg/l	NSPS
00940	Chloride, Total		mg/l	Monitor Only
00945	Sulfate, (SO4)	1752	mg/l	WQS-Per Guidance
00515	Residue, Total Dissolved	1500	mg/l	WQS
00530	Total Suspended Solids	35	mg/l	NSPS
00530	Total Suspended Solids	70	mg/l	NSPS
00056	Flow Rate		GPD	Monitor Only
00095	Specific Conductance at 25 Degrees C		Umho/cm	Monitor Only
00400	pH	6.5	S.U.	WQS
00400	pH	9.0	S.U.	WQS
74010	Iron, Total (Fe)	3.0	mg/l	NSPS
74010	Iron, Total (Fe)	6.0	mg/l	NSPS
004				
Final				
Rpt Code	Parameter	Limit	Units	Justification
74013	Manganese, Total	2.0	mg/l	NSPS
74013	Manganese, Total	4.0	mg/l	NSPS
00940	Chloride, Total		mg/l	Monitor Only
00945	Sulfate, (SO4)	1752	mg/l	WQS-Per Guidance
00515	Residue, Total Dissolved	1500	mg/l	WQS
00530	Total Suspended Solids	35	mg/l	NSPS
00530	Total Suspended Solids	70	mg/l	NSPS
00056	Flow Rate		GPD	Monitor Only
00095	Specific Conductance at 25 Degrees C		Umho/cm	Monitor Only
00400	pH	6.5	S.U.	WQS
00400	pH	9.0	S.U.	WQS
74010	Iron, Total (Fe)	3.0	mg/l	NSPS
74010	Iron, Total (Fe)	6.0	mg/l	NSPS
005				
Final				
Rpt Code	Parameter	Limit	Units	Justification
74013	Manganese, Total	2.0	mg/l	NSPS
74013	Manganese, Total	4.0	mg/l	NSPS
00940	Chloride, Total		mg/l	Monitor Only
00945	Sulfate, (SO4)	1752	mg/l	WQS
00515	Residue, Total Dissolved	1500	mg/l	WQS
00530	Total Suspended Solids	35	mg/l	NSPS

Report Date:6/10/2011

WLA for North Star 1 Mine

using Short Cree near Dillonvale 03111500

7Q10	9.1 cfs	123	sq miles
1Q10	7.2		

Cross Creek adjacent to Mine

7Q10	116 sq miles	equals	8.6	cfs
1Q10	116 sq miles	equals	6.8	cfs

Considering flow from site is rainfall generated and using BPJ
use 10% of Average daily flow from annualized flow

with a drainage area of		156.2	flow	371900	gpd
10% of flow equals	37190 gpd		or	0.06	cfs

Upstream data to be used:

Cross Cree RM 6.95	Hardness	Sulfate	Chloride	TDS
6/23/2010	265	258	38.5	612
7/7/2010	467	326	47.3	724
7/27/2010	435	304	47.6	698
8/9/2010	476	365	56.6	770
9/13/2010	428	278	72.1	768
Mean	414.2	306.2	52.42	714.4
Median	435	304	47.6	724

OMZA application of TDS — Flow is less than 0.7% of streamflow

724 mg/L TDS upstream

1500 mg/L

using mass balance 117471 mg/L this is not expected

Acute Sulfate Chloride equation

Acute sulfate=(-57.478+5.79(hardness)+54.163(chloride))*0.65

Acute sulfate= 3275.565

IMZM Sulfate=1276.7+(5.508*hardness)-(1.457*chloride)

Sulfate IMZM= 3603.327

Appendix Table 1. Continued.

Parameter	Units	Site Location: **Cross Ck @ CR 26** River Mile: 9.72 Storet: C04S04					Site Location: **Cross Ck @ TR 166 Dst landfills/Ust Satralloy** River Mile: 6.95 Storet: 301050				
		6/23/2010	7/7/2010	7/27/2010	8/9/2010	9/13/2010	6/23/2010	7/7/2010	7/27/2010	8/9/2010	9/13/2010
Acidity	mg/L	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity	mg/L	138	NA	163	151	152	131	144	147	153	135
Aluminum	ug/L	<200	<200	<200	<200	<200	314	<200	464	333	222
Ammonia	mg/L	<0.050	NA	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Arsenic	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Barium	ug/L	54	63	61	60	56	53	61	62	58	55
Cadmium	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Calcium	mg/L	111	128	127	123	117	106	126	118	128	117
Chloride	mg/L	31.2	33.1	37.5	44.6	45.6	38.5	47.3	47.6	56.6	72.1
Chromium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
COD	mg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Conductivity	umhos/cm	864	NA	1040	1050	1050	855	974	974	1100	1070
Copper	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.7	2.2	5
Hardness, Total	mg/L	277	488	482	468	449	265	467	435	476	428
Iron	ug/L	204	129	158	89	99	673	266	936	686	408
Lead	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Magnesium	mg/L	32	41	40	39	38	30	37	34	38	33
Manganese	ug/L	40	43	49	47	45	58	62	155	89	102
Nickel	ug/L	2.8	2.7	2.7	2.1	2	3.5	3.2	4	3.5	3.9
Nitrate+nitrite	mg/L	0.22	NA	0.14	<0.10	<0.10	0.27	0.16	0.43	<0.10	1.55
Nitrite	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Potassium	mg/L	3	3	4	4	4	3	4	4	4	5
Selenium	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Sodium	mg/L	27	32	42	41	41	27	33	40	47	49
Strontium	ug/L	526	653	667	613	607	472	584	543	589	508
Sulfate	mg/L	276	355	359	373	323	258	326	304	365	278
TKN	mg/L	<0.20	NA	0.35	0.34	0.39	0.23	0.39	0.28	0.41	0.59
Total Dissolved Solids	mg/L	606	720	732	756	782	612	724	698	770	768
Total Phosphorus	mg/L	0.01	NA	0.015	0.015	<0.010	0.048	0.043	0.079	0.059	0.141
Total Suspended Solids	mg/L	<5	6	<5	<5	5	20	9	41	17	10
Zinc	ug/L	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Field Measurements											
Temperature	°C	25.11	27.18	25.17	26.68	20.94	25.09	25.4	26.19	24.1	18.89
Conductivity	µmhos/cm	853.9	999.2	1015.1	1035.8		722.7	993.5	961.5	1072.5	1046.5
Dissolved Oxygen	mg/L	9.68	8.99	9.2	9.31	9.72	7.46	9.19	7.48	10.2	11.08
D.O. Saturation	%	117.6	113.5	112	116.5	109.2	90.6	112.3	92.8	121.7	119.5
pH	S.U.	8.17	8.14	7.84	8.34	8.11	8.43	8.31	8.41	8.26	8.29

This also has info on metals and mercury

Permitting of Dissolved Inorganics for Coal Individual Permits

Introduction

As soon as we receive a renewal application ask for more effluent data for hardness, chloride, etc.

To provide some guidance through the changes related to TDS, we are providing district staff with rule citations and methods for developing WQ-based effluent limits and other permit conditions related to dissolved solids and its constituent ions.

The toxicity of total dissolved solids is related to both the toxic effect of specific ions and the total additive effect of those ions. An example of the first effect is that effluents that have the same overall TDS concentration may have different toxicities based on the anions present – discharges that have higher sulfate concentrations are more toxic than discharges where chloride is the primary anion. The toxicity of TDS in an effluent is also related to the concentration of bicarbonate ions (water hardness). Increases in water hardness mitigate toxic effects between hardness concentrations of 100 mg/l to 500 mg/l. Hardness concentrations above 500 mg/l may add to toxicity by adding to the total ion concentration in the water.

To account for the different toxicities of different ion mixes, we have developed formula to calculate water quality criteria for sulfate and chloride based on hardness. Usually limits are set for the primary anion based on receiving water hardness, and an assumed concentration of the other ion (Sulfate, being the primary anion in coal process wastewaters, has criteria that depend on hardness and chloride concentrations in the stream).

In permits where sulfate is the primary toxic component of TDS, a maximum sulfate WQBEL is used instead of a maximum TDS WQBEL.

We must still do a WQBEL for chronic TDS

If chloride is the primary toxic component I think we'd also do a WQBEL for chloride

Here is the formula:

Acute sulfate criterion = [-57.478+5.79(hardness) + 54.163(chloride)]*0.65. The maximum hardness used in this formula is 500 mg/l. If the receiving water hardness is >500 mg/l, use 500 mg/l in the criterion formula.

There is also a formula for chloride it we to use that.

IMZM criterion = 1276.7 mg/l + (5.508*hardness) - (1.457*chloride)

Unless the stream provides significant dilution, the acute criterion will be more restrictive than IMZM

Note that, unlike other aquatic life criteria, the IMZM for sulfate is less than two times the OMZM criterion.

Some mines will have new discharges that will have the same or very similar quality as the current discharges at a mine or discharges from other nearby surface mines they operate. In that case we should ask for the form 2C and 2D for the new outfalls based on sampling of the existing discharges. The form 2D provides some information the 2C doesn't. We also need drainage areas for each outfall to calc. an ADF

Applications

We will be receiving either Application Form 2C or 2D for each site. Form 2C (existing sources and those new sources that can project data from existing facilities) will have data for sulfate from Part V, B. of the application. Form 2D (new facilities) will require an estimate of sulfate concentrations.

With either application, we should require the facility to submit effluent data for TDS and chloride. If the facility has downstream data for hardness and chloride on the receiving water, they should submit that, too. The downstream data is used to calculate the WQS for sulfate.

I assume this means downstream data if the mine already has discharges to the stream. If it's a brand new discharge from a new mine there is no upstream of downstream yet unless the site has already been impacted by mining.

ODNR *may have* WQ data and discharge data for mines and that they *reportedly* require stream sampling results to be submitted with the mine application to ODNR. *This may be a good source of* information.

Use this data if calc. a chloride limit if chloride is the primary pollutant

Any upstream data for sulfate, TDS or metals should also be required if available. In our modeling rules, median or mean concentrations are used as back ground if data are available from the receiving water or a representative local stream. If no background data are available, we would use the 25th percentile of a reference data set, such as the Western Allegheny Plateau (WAP) Ecoregion data shown below (again, specified in our modeling rules):

	Reference Sites			Mine-affected Sites		
Percentile	Hardness	Sulfate	Chloride	Hardness	Sulfate	Chloride
10	116	25	12	120	38	8
25	**145**	**33**	**18**	**196**	**72**	**13**
50	208	53	27	281	153	24
75	258	142	40	417	360	44
95	419	259	86	948	945	126

The data for mine-affected sites should be used if there has been any mining in the HUC-12 watershed. This should cover most of the waterbodies in coal-bearing areas of the WAP. For watersheds that have not had mining discharges or surface effects in the past, the ecoregion reference site data should be used.

See my recent email about HUC 12 Watersheds

The values in this table can be presented as default values to be used in the absence of local data. If the applicant wishes to collect local data, this data may guide that decision.

Discharge Limits

Limits for TDS are calculated in the same way as other WQBELs for TDS. You can use either the WLA spreadsheet, or calculate the limits by hand. The inputs for this allocation are:

WQS = 1500 mg/l

Could ask Kelly to help with these low flows like we've done in the past.

Annual 7Q10 flow – from USGS low-flow book or other reference (another discharger's WLA, for example). Remember to incorporate the % of effluent flow used in the allocation (the spreadsheet does this automatically) – [OAC 3745-2-05(A)(2)].

If discharge is dependent on precipitation, the effluent flow should be calc. as we've done in the past using the drainage area and annual average rainfall divided by 365 and assuming 80% runoff using the Excel spreadsheet.

Effluent flow – "a reasonable measure of average flow" [OAC 3745-2-05(A)(4)(b)]. We normally use an upper bound of the average flow. Measures of this flow might be either the maximum 30-day average flow from the application, the 95th percentile of reported monthly average flows, or for new discharges, a design average flow.

Upstream concentrations of pollutants – Combine any upstream data reported by the applicant with any applicable data available from OEPA surveys or compliance samplings. The upstream concentration for the WLA is the 50th percentile if N≥10, or the mean if N is less than 10 samples. [OAC 3745-2-05(A)(3)]. If no representative data exists for a particular receiving water use data from: (1) an adjacent stream; or (2) background water quality data for the ecoregion or from the background water quality report. If data from (2) is used, the background concentration will be the 25th percentile of the data. [OAC 3745-2-04(E)(1)(b)].

Limits for sulfate need to be calculated by hand at the moment; criteria are not in the WLA spreadsheet yet. The downstream WQS are calculated from the downstream data. Measures

of hardness and chloride need to be calculated using the 50th percentile for N≥10, or the mean if N is less than 10 samples.[OAC 3745-2-04(E)(1) – This rule addresses only hardness, but it is reasonable to apply it to chloride as well]. If no representative data exists for a particular receiving water use 25th percentile data from the WAP Ecoregion in the table above.

Use effluent hardness and chloride if the discharge makes up most all flow in the stream

Effluent data may be used in this calculation only if the pond or other treatment system represents the headwater of the stream.

Effluent flows for sulfate and metals should be the same as those used in the TDS WLA.

Critical flows should be used in the WLA calculation, as provided in our modeling rules, as a default. For sulfate maximum criteria, use the 1Q10 flow. For metals and other pollutants, the critical flows are:

You can "dilute" to meet WQ based effluent limits. After meeting tech. based limits, the discharge could combine with site runoff in another settling pond (including sanitary) so WQ based limits are met at end of pipe before the stream.

Average aquatic life: 7Q10 (except ammonia-N: 30Q10)

Maximum aquatic life: 1Q10 (except ammonia-N: 7Q10)

Human Health and Agricultural Water Supply: Harmonic mean

If the discharge may not meet standards and there is dilution, there may be an opportunity to store the runoff or other mine discharges and release when stream flows are adequate. This will require storage and stream flow measurement and appropriate permit monitoring requirements and conditions.

These outfalls may not discharge at critical flows. If the discharge does not occur to the head of a stream, WLAs and permit conditions can be structured to reflect alternate dilutions. In this case, a minimum stream flow needs to be defined, and the permit written to prohibit discharges at flows less than the defined stream flow (similar to permit conditions for controlled lagoon types of sewage treatment plants). All WLAs would be calculated using this alternate dilution; all reasonable potential determinations and permit conditions would be based on this alternate dilution unless a critical flow WLA yields a higher WLA.

Note that the mixing zone ban applies to allocations for mercury and other bioaccumulative chemicals of concern (BCCs). WLAs and any needed limits for mercury must be based on WQS at the discharge point.

Monitoring

Process discharges should be monitored for other components of TDS at a quarterly frequency. These include sodium, calcium, magnesium, hardness and chloride. For existing discharges, or new dischargers using Form 2C, the permit should also contain monitoring requirements for selenium, low-level mercury and any other metals that are listed in Group 4 or Group 5 of the WLA hazard assessment. For new dischargers using Form 2D, the permit should include monitoring for all priority pollutant metals at least annually (selenium and mercury should be at least quarterly).

From the WLA spreadsheet.

We may want to also get some downstream hardness and chloride monitoring in the permit to help in future permit development.

USGS Ohio StreamStats

Streamstats Ungaged Site Report

Date: Fri May 27 2011 12:18:45 Mountain Daylight Time
Site Location: Ohio
NAD27 Latitude: 40.3044 (40 18 16)
NAD27 Longitude: -80.6772 (-80 40 38)
NAD83 Latitude: 40.3045 (40 18 16)
NAD83 Longitude: -80.6770 (-80 40 37)
Drainage Area: 116 mi2

Peak Flows Basin Characteristics			
100% Peak Flow Full Model (116 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	116	0.01	7422
Ohio Region C Indicator 1 if in C else 0 (dimensionless)	0	0	1
Ohio Region A Indicator 1 if in A else 0 (dimensionless)	0	0	1
Stream Slope 10 and 85 Longest Flow Path (feet per mi)	14.9	1.53	674
Percent Storage from NLCD (percent)	1.97	0	25.8

Mean and Percentile Basin Characteristics			
Y coordinate (latitude) of the centroid in decimal degrees=40.3624			
100% Low Flow Lattitude LE 41.2 (116 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	116	0.12	7422
Percent Forest (percent)	59.2	0	99.1
Percent Storage from NLCD (percent)	1.97	0	19
Mean Annual Precipitation (inches)	39.4	34	43.2
Streamflow Variability Index (dimensionless)	0.47	0.25	1.13
Latitude of Basin Centroid (decimal degrees)	40.3625	38.68	41.2
Longitude of Basin Centroid (decimal degrees)	80.8131	80.53	84.6

Peak Flows Streamflow Statistics					
Statistic	Flow (ft^3/s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
PK2	2350	37	2.1	1250	4410
PK5	3520	35	3.3	1940	6390
PK10	4320	34	4.4	2380	7830
PK25	5250	35	5.9	2840	9700
PK50	5920	37	6.8	3140	11200
PK100	6590	38	7.5	3410	12800
PK500	8020	42	8.6	3870	16600

Mean and Percentile Streamflow Statistics					
Statistic	Flow (ft^3/s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
Q1	195	17			
Q2	214	12			
Q3	257	14			
Q4	220	11			
Q5	141	20			
	95.9				

Q6		27			
Q7	59.6	28			
Q8	50	37			
Q9	37.9	44			
QA	135	11			
Q10	31.5	51			
Q11	67.7	38			
Q12	137	22			
QAH	29.9	66			
FPS25	24.4	29			
FPS50	70.9	40			
FPS75	157	48			

USGS
Ohio StreamStats

Flow Estimates Based on Flows at Nearby Streamgaging Stations

Date: Fri May 27 2011 12:21:46 Mountain Daylight Time
NAD27 Latitude: 40.3044 (40 18 16)
NAD27 Longitude: -80.6772 (-80 40 38)
NAD83 Latitude: 40.3045 (40 18 16)
NAD83 Longitude: -80.6770 (-80 40 37)
ReachCode: 05030101000557
Measure: 92.90
User-Selected Site Watershed Area, in square miles: 116
Use Regulated Station: No

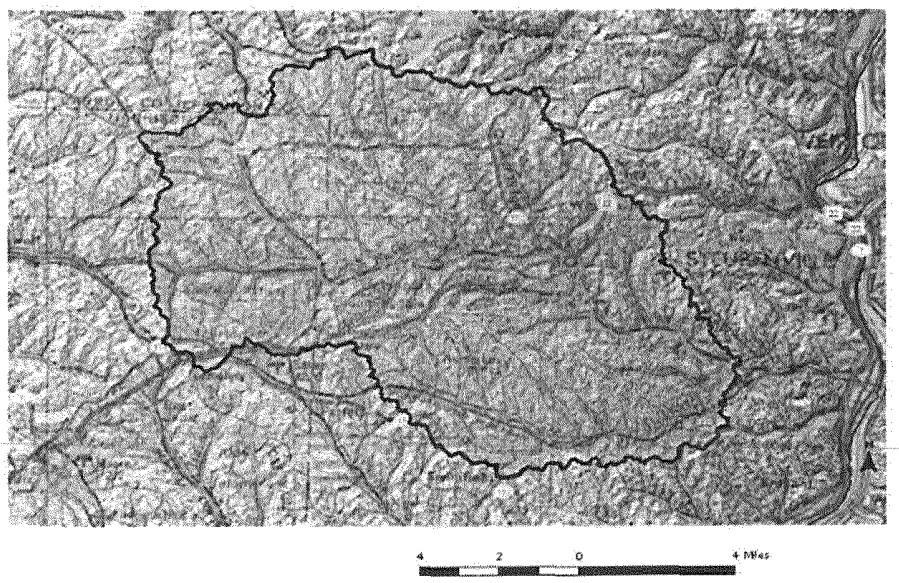
Warning:
No upstream or downstream gaging station has a drainage area that is within 50 percent of the drainage area for the selected ungaged site, thus no further computations can be completed.

Upstream Gage
No records found.

Downstream Gage
No records found.

USGS
Ohio StreamStats

StreamStats Print Page



Explanation

- GlobalWatershedPoint
- Slp1085Point
- LongestFlowPath3D
- CentroidOH
- StreamCells
- GlobalWatershed
- ExcludePoly
- Gaging Station, Continuous Record
- Low Flow, Partial Record
- Peak Flow, Partial Record
- Peak and Low Flow, Partial Record
- Miscellaneous Record
- Unknown

5/27/2011 12:22:33 PM

Name: North Star 1 Mine

	Drainage Area Acres	Average Daily Flow from Runoff * (gpd)	Additional Flow , e.g. Process Wastewater (gpd)	Total Flow gpd (Column C + D)
Outfall: 001	30.1	71657	0	71700
Outfall: 002	16.1	38328	0	38300
Outfall: 003	4.9	11665	0	11700
Outfall: 004	33.9	80704	0	80700
Outfall: 005	22.1	52612	0	52600
Outfall: 006	8.2	19521	0	19500
Outfall: 007	40.9	97368	0	97400

* ((Acres*40/12*325851*0.8)/365)
0.8 = runoff coef.

A. Pennington
D

JEFFERSON

PUBLIC NOTICE

The following applications and/or verified complaints were received, and the following draft, proposed and final actions were issued, by the Ohio Environmental Protection Agency (OEPA) last week. "Actions" include the adoption, modification, or repeal of orders (other than emergency orders); the issuance, denial, modification or revocation of licenses, permits, leases, variances, or certificates; and the approval or disapproval of plans and specifications. "Draft actions" are written statements of the Director of Environmental Protection's (Director's) intent with respect to the issuance, denial, etc. of a permit, license, order, etc. Interested persons may submit written comments or request a public meeting regarding draft actions. Comments or public meeting requests must be submitted within 30 days of notice of the draft action. "Proposed actions" are written statements of the Director's intent with respect to the issuance, denial, modification, revocation, or renewal of a permit, license or variance. Written comments and requests for a public meeting regarding a proposed action may be submitted within 30 days of notice of the proposed action. An adjudication hearing may be held on a proposed action if a hearing request or objection is received by the OEPA within 30 days of issuance of the proposed action. Written comments, requests for public meetings and adjudication hearing requests must be sent to: Hearing Clerk, Ohio Environmental Protection Agency, P.O. Box 1049, Columbus, Ohio 43216-1049 (Telephone: 614-644-2129). "Final actions" are actions of the Director which are effective upon issuance or a stated effective date. Pursuant to Ohio Revised Code Section 3745.04, a final action may be appealed to the Environmental Review Appeals Commission (ERAC) by a person who was a party to a proceeding before the Director by filing an appeal within 30 days of notice of the final action. Pursuant to Ohio Revised Code Section 3745.07, a final action issuing, denying, modifying, revoking or renewing a permit, license or variance which is not preceded by a proposed action, may be appealed to the ERAC by filing an appeal within 30 days of the issuance of the final action. ERAC appeals accompanied by a $70.00 filing fee which the Commission in its discretion may reduce if by affidavit the appellant demonstrates that payment of the full amount of the fee would cause extreme hardship, must be filed with: Environmental Review Appeals Commission, 309 South Fourth Street, Room 222, Columbus, Ohio 43215. A copy of the appeal must be served on the Director within 3 days after filing the appeal with ERAC.

APPLICATION FOR ANTIDEGRADATION PROJECT

OHIO AMERICAN ENERGY, INC. - NORTH STAR 1 MINE
34 KELLEY WAY
BRILLIANT, OH 43913 OH ACTION DATE : 04/19/2011
RECEIVING WATERS: MCINTYRE CREEK AND CROSS CREEK
FACILITY DESCRIPTION: WASTEWATER
IDENTIFICATION NO. : 0IL00155
ANTIDEGRADATION PROJECT AS DEFINED BY OAC 3745-1-05 - AN EXCLUSION OR WAIVER IS NOT APPLICABLE. REQUESTS TO BE ON THE INTERESTED PARTIES MAILING LIST SHOULD BE SUBMITTED WITHIN 30 DAYS TO OHIO EPA-DIVISION OF SURFACE WATER, ATTENTION: PERMITS PROCESSING UNIT, 50 WEST TOWN STREET, P.O. BOX 1049,COLUMBUS, OHIO 43216-1049.

Ohio American Energy: Antidegradation

resulting from the project or approval of the application. The exclusions refer to the level of the requested discharge in relation to what the stream or receiving water can handle safely (e.g. application proposed to discharge at less then ten percent of what the stream can accept) or that an environmental benefit will result from the proposed activity (e.g. cleanup of contaminated ground water, providing sewage services to homes with unsanitary conditions, etc.).

The exclusions are outlined by the rules and Ohio EPA makes the determination if a project and/or application meets the appropriate conditions. If a project is determined to meet one of these exclusions, the application and review process is somewhat streamlined since a detailed analysis for environmental, human health and water resource protection is not warranted.

Will the WQS be lowered? What is the risk to the environment and public health? What is meant by a lowering of water quality?

Any project that is subject to the antidegradation rule will result in a "lowering of water quality" by definition. However, this does not mean that the utilization of that water body for recreational purposes, water consumption or other direct or indirect utilization will be harmed or that the aquatic life and fish communities present in that water body are impacted or harmed in any way. In simple terms, a "lowering of water quality" simply means that the existing instream conditions may be modified by the proposal–it will be a different environment within the water that will still be protective of all uses for that water body. Though there will be this "lowering of water quality," at no time will any discharge be able to exceed the values derived in Ohio water quality standards that were developed to protect all ultimate uses of a water body.

How can I learn more about the project under consideration?

All discharge or construction permit applications are initially submitted to the district office responsible for that geographic area. The district offices are responsible for coordinating the review and/or evaluation of these applications. Copies of all applications including detailed design drawings and any associated correspondence with the applicant can be viewed at the appropriate district office.

What is the antidegradation review schedule? How can I comment on this proposal?

Initially, once the application is received and notice issued there is a 30 day comment period from the date of this notice/fact sheet–this date is documented on this fact sheet. During this period, interested parties can request to be kept informed of the project by being placed on the mailing list for the project and may also request a hearing on the application or proposal if one has not already been scheduled. Such requests need to be forwarded to the Ohio EPA in writing. Once this initial comment period is over, a draft/proposed permit action may be taken recommending either approval or denial of the application. This then would have an additional comment period of at least 30 days before a final action can be taken on the application.

For More Information

To be placed on the interested parties mailing list, request a public hearing or request additional information relative to this project you should contact Ohio EPA in writing at:

Ohio EPA
Division of Surface Water
50 West. Town Street, Suite 700
P.O. Box 1049
Columbus, OH 43216-1049.

Also, additional information can be obtained by contacting the Division of Surface Water staff at the appropriate district office.

Ohio EPA District Offices

Ohio EPA-Southeast District Office
2195 Front Street
Logan, Ohio 43138
(740) 385-8501

Ohio EPA-Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911
(937) 285-6357

Ohio EPA–Northwest District Office
347 N. Dunbridge Road
Bowling Green, Ohio 43402
(419) 352-8461

Ohio EPA-Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087
(330) 963-1200

Ohio EPA-Central District Office
50 West Town Street, Suite 700
Columbus, Ohio 43215
(614) 728-3778

INTER-OFFICE COMMUNICATION

Date to CO: 6/10/11

TO: Patti Smith, DSW, Columbus
FROM: SEDO/DSW
SUBJECT: Entity: North Star Mine NPDES No.: IL0015514AD

ANTIDEGRADATION STATUS ☞ ANTIDEG ☑ NON ANTIDEG ☐

Permit Action	NEW ✓ REV__ MOD __ NPR __ REN __ TRAN __	Major __ Minor ✓	Agent AG

THE FOLLOWING ITEMS ARE INCLUDED IN THIS NPDES PACKAGE

1. ☑ Draft Permit Action
2. ☑ Limitation Justification Report - SEDO File Only
3. ☐ Reasonable Potential Calculation
4. ☑ SEJ Report if Antidegradation Applies and no Exclusion Applies
5. ☐ Application Updates/Additions
6. ☐ Cover Memo for the File Noting Changes Made to the Expired Permit Included in this permit. (if no changes or only a few very minor ones- note below in comments)
7. Other:_____

ADDITIONAL INFORMATION

Prepermit Inspection Date: _____
Prepermit Letter Sent: Yes ___ No ✓

Flow Data:

Outfall	Flow (gpd)*	Outfall	Flow (gpd)
001	7d,700	005	52,600
002	86,200	006	19,500
003	16,700	007	88,400
004	86,700		

All batch

* value used for loading calculation

Compliance Status with Expired Permit => ☐ Compliance ☐ Noncompliance ☐ Significant ☐ NA

Comments: new permit
used language from general permit
used controlled surface mine for alt effluent language for precip (underground workings - category)
for 7Q10 used USGS Low flow characteristics 03111500
used Stream Stats for discharge - picked point adjacent on Cross Creek
McIntyre discharge on <0.3 mile for compliance.
No Reasonable Potential for TDS - EL showed monitoring 1/qtr
Sulfate is probably dominate TDS so EL showed IMAM value of 3600 using the attached guidance/pol
I showed 1/Mo but we should consider reduc.

Supervisor: BK Date: 6/10/11

Changed limits per CO/Supervisor instruction